

REMARKS

The Examiner has objected to claims 27 and 28 but has indicated that such claims would be allowable if rewritten in independent form to include all of the limitations of the base and any intervening claims. Claims 50 and 51, added by the present amendment, represent claims 27 and 28 rewritten in independent form as suggested by the Examiner. Accordingly, Applicant's now respectfully request allowance of claims 50 and 51.

The Examiner has objected to the current Oath or Declaration. Applicant is in the process of obtaining a new Oath or Declaration and will submit the same as soon as possible. The Examiner is respectfully requested to hold this objection in abeyance.

Examiner has objected to the current drawings as being informal. Applicant will submit formal drawings upon receiving a Notice of Allowance.

The Examiner has objected to the title of the invention. As indicated above, Applicant has amended the application to delete the old title and add the new title suggested by the Examiner.

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Claim Rejections – 35 U.S. C. § 112

Examiner has rejected claims 11-12 and 37-39 as being indefinite due to the use of a term “dielectric material” “conductive material” and “semiconductive material.” While Applicant respectfully traverses the Examiner’s rejection, in the interests of advancing the prosecution of this application, claims 11-12 and 37-39 have been cancelled rendering this rejection moot at this time.

Claim Rejections – 35 U.S.C. § 102

The Examiner has rejected claims 1-5, 7-8, 10-11, 14, 16, 18-19, and 46-49 under 35 U.S.C. § 102. While Applicant respectfully traverses the Examiner’s rejection, in the interests of advancing the prosecution of this application, claims 1-5, 7-8, 10-11, 14, 16, 18-19, and 46-49 have been cancelled rendering this rejection moot at this time.

Claim Rejections – 35 U.S.C. § 103

The Examiner rejected claims 20 and 26 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 5,495,822, issued to Utsumi et al. The Examiner indicates that Utsumi et al. does not explicitly teach that the precursor fluid is substantially exhausted and removed from the reaction chamber in between each pulse of the precursor fluid. The Examiner also indicates that Utsumi et al. does not explicitly teach purging with an inert gas. The Examiner asserts, however, that either of such steps would be obvious to one of ordinary skill in the art.

Utsumi et al. discloses only that the flow of precursor gas is reduced or stopped (Col. 5, lines 43-45) in an effort to reduce the production quantity of vapor phase decomposed species, which can contaminate the layer or film. Col. 5, lines 49-53. As is known to those of ordinary skill in the art, purity of the layer or film is highly desirable.

As indicated by the Examiner, Utsumi et al. does not disclose the additional step set forth in claim 26 of flowing an inert gas through said reaction chamber in between pulses of the precursor fluid in order to purge from the reaction chamber any precursor fluid not converted into solid. More specifically, claim 26 provides an additional step beyond that disclosed by Utsumi et al. in an effort to achieve purity. Because this additional step is not taught by Utsumi et al., Applicant respectfully traverses the Examiner's rejection.

Accordingly, to more specifically set forth the invention being claimed, Applicant has amended claim 20 as set forth above to include the specific limitation of claim 26 and claim 26 has been cancelled. Applicant respectfully asserts that amended claim 20 is allowable over the prior art of record and requests allowance of claim 20 as amended.

The Examiner also rejected claims 21, 23-25, and 29-30 under 35 U.S.C. § 103(a) as being unpatentable over Utsumi et al., and rejected claim 22 under 35 U.S.C. § 103(a) as being unpatentable over Utsumi et al. in view of Murota et al. However, as already discussed above with regard to claims 20 and 26, neither Utsumi et al. nor Murota et al. contain the additional limitation now set forth in amended claim 20 of flowing an inert gas through said reaction chamber in between pulses of the precursor fluid in order to purge from the reaction chamber any precursor fluid not converted into solid. As claims 21-25 and 29-30 each depend from amended claim 20, the Examiner is respectfully requested to remove this rejection and allow these claims to issue.

The Examiner has also rejected claims 1-19 and 31-49 under 35 U.S.C. § 103(a). While Applicant respectfully traverses the Examiner's rejection, in the interests of advancing the prosecution of this application, claims 1-19 and 31-49 have been cancelled rendering this rejection moot at this time.

The applicant respectfully submits that the present claims patentably define over all of the prior art of record. It is believed that the present application is in condition for allowance and favorable action, therefore, is respectfully requested. The Examiner is invited and encouraged to telephone the undersigned, however, should any issues remain after consideration of this response.

Applicants therefore respectfully request reconsideration of the present application as amended.

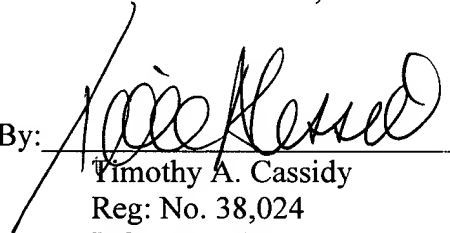
If any fee or extension of time is required to obtain entry of this response, the undersigned hereby petitions the Commissioner to grant any necessary time and extension and authorize its charging deposit account number 40-1403 for any such fee not submitted herewith.

DATE: _____

1/15/02

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APPENDIX A

A process for forming layers in electronic devices comprising the steps of:

providing a reaction chamber;

placing a semiconductor wafer in said reaction chamber;

heating said semiconductor wafer with a thermal heating device placed adjacent to said wafer;

pulsing a precursor fluid into said reaction chamber, said precursor fluid forming a solid layer on said semiconductor wafer;

thereafter exposing said solid layer to light energy in said reaction chamber; and

wherein [said precursor fluid is substantially exhausted and removed from said reaction chamber and said solid layer is exposed to said light energy in] between each pulse of said precursor fluid, (i) said reaction chamber is purged by flowing an inert gas through said reaction chamber in order to substantially remove any said precursor fluid not converted into a solid, and (ii) said solid layer is exposed to said light energy.